Project Title: Participatory Assessment of Land Capability for Agroforestry in Selected Upland Farming Communities in the Province of Laguna, Philippines using Agroforestry Land Capability Assessment and Mapping Schemes (ALCAMS)

ACTIVITY REPORT

Establishment of Agroforestry Models in Barangay Tala, Rizal Laguna and Barangay San Cristobal, San Pablo City, Laguna

One of the project's key deliverables was the establishment of an agroforestry model at each study sites. The basis for the design and establishment of each model farm was the results of the Agroforestry Land Capability Assessment and Mapping Scheme (ALCMS). These agroforestry models aimed to serve as the learning site for local farmers, providing technical knowledge on sustainable farming practices through agroforestry.

In Barangay Tala, Rizal Laguna, a total of 2,409 m^2 was developed into an alley cropping agroforestry system, which is owned by Mr. Lauro A. Esquivel. The construction of hedgerows using kakawate (*Gliricida sepium*) along the contour lines was done to serve as barrier against soil erosion (Figure 1). Fruit bearing trees such as lipote (*Syzygium polycephaloides*), pili (*Canarium ovatum*), duhat (*Syzygium cumini*) and mango (*Mangifera indica*) were planted along the farm boundary to act as windbreaks, protecting the agricultural crops planted within the farm. Beyond their protective function, these fruit trees are also expected to provide additional income once they reach full maturity. Short-term crops such as sweetpotato (*Ipomoea batatas*) and eggplant (*Solanum* melongena) were planted to generate immediate source of food and income.

Figure 1. Planting of kakawate as hedgerows.

Figure 2. Planting of sweetpotato.

Figure 3. Actual photo of established alley cropping agroforestry system in Barangay Tala, Rizal, Laguna.

Meanwhile, a farm size of 2,409 m^2 owned by Mr. Norman Anenias in Barangay San Cristobal, San Pablo, Laguna, was developed into a fruit-tree based agroforestry system. This agroforestry system primarily composed of fruit bearing trees like avocado (*Persea americana*), durian *(Durio zibethinus*) and lanzones (*Lansium domesticum*). While these trees require time to mature before generating income, short-term crops such as eggplant (*Solanum melongena*) and string beans (*Vigna unguiculata subsp. sesquipedalis*) were planted to ensure immediate harvests and provide steady income.

Table 1. Descriptions of the agroforestry model at each study site.

	Barangay Tala, Rizal	**Barangay San Cristobal, San Pablo**
Farm size	2,441 m2	2,409 m^2
Elevation	617 masl	313 masl
Slope	28.5%	8.6%
Soil texture	Sandy loam	Sandy loam
Soil fertility	Low	Low
Land capability class based on ALCAMS	Marginally capable for Agroforestry	Marginally capable for Agroforestry
Appropriate agroforestry System	Alley Cropping	Fruit tree-based

Figure 4-5. Planting of fruit trees such as durian and lanzones in the model farm at Barangay San Cristobal, San Pablo, Laguna.

Figure 6. Actual photo of established fruit-tree based agroforestry system in Barangay San Cristobal, San Pablo, Laguna.

The people's organizations such as the Sto. Nino Upland Farmer's Association in Barangay Tala, Rizal and Mamay Tobal's Farmers' Association in Barangay San Cristobal, San Pablo, play a crucial role in the success of agroforestry models. They take lead in the establishing and maintaining these models, allowing them to gain a thorough understanding of the process and personally acquire the skills and knowledge necessary for sustainable agroforestry practices. Their involvement also allows them to serve as advocates of the agroforestry models, fostering the sense of ownership and encouraging active engagement. To further ensure the long-term sustainability of these models, the local government unit, particularly the Municipal Agriculture Office, provides essential support. These includes resources and guidance in the establishment and maintenance of the models.